IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	§	Group Art Unit: 2141
	§	
Bernard A. Traversat, et al.	§	Examiner: Luu, Le Hien
	§	
	§	Atty. Dkt. No.: 5181-82104
	§	
Serial No. 10/055,645	§	
	§	
	§	
Filed: January 22, 2002	§	
	§	
For: PEER-TO-PEER NETWORK COMPUTING PLATFORM		

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir/Madam:

Further to the Notice of Appeal filed April 30, 2007, Appellants present this Appeal Brief. Appellants respectfully request that the Board of Patent Appeals and Interferences consider this appeal.

I. REAL PARTY IN INTEREST

As evidenced by the assignment recorded at Reel/Frame 012545/0541, the subject application is owned by Sun Microsystems, Inc., a corporation organized and existing under and by virtue of the laws of the State of Delaware, and now having its principal place of business at 4150 Network Circle, Santa Clara, CA 95054.

II. RELATED APPEALS AND INTERFERENCES

No other appeals, interferences or judicial proceedings are known which would be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1-40 are pending and stand finally rejected. Claims 7, 19, 20 and 22 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims and pending resolution of the provisional double patenting rejection. The rejection of claims 1-40 is being appealed. A copy of claims 1-40 is included in the Claims Appendix herein below.

IV. STATUS OF AMENDMENTS

No amendments have been submitted subsequent to the final rejection. The Claims Appendix hereto reflects the current state of the claims.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 is directed to a peer computing system that includes peer protocols through which peers may discover each other and cooperate with each other to form peer groups. *See, e.g.,* Abstract. The peer computing system includes a plurality of peer nodes. *See, e.g.,* FIGs. 1A and 1B; page 4 lines 15-20; FIG. 4 (peers 200); page 35, lines 15-18.

At least a subset of the peer nodes in the peer computing system are configured to participate in a peer discovery protocol to discover other peer nodes. *See, e.g.,* page 6, lines 14-18; page 23, line 25 - page 24, line 3; page 54, line 5 - page 55, line 27; FIG. 12. Page 70, line 22 - page 73, line 13 describes an exemplary peer discovery protocol.

At least a subset of the peer nodes in the peer computing system are configured to participate in a peer membership protocol for joining or forming a peer group with other peer nodes. *See, e.g.,* page 6, lines 19-22; page 24, lines 16-23. Page 77, line 9 - page 81, line 14 describes an exemplary peer membership protocol.

Independent claim 12 is directed to a peer computing system that provides means for peers to discover resources in the peer computing system and means for peers in the peer computing system to join or form peer groups. The peer computing system includes a plurality of peer nodes. *See, e.g.,* FIGs. 1A and 1B; page 4 lines 15-20; FIG. 4 (peers 200); page 35, lines 15-18.

The peer computing system includes means for at least a subset of the peer nodes to discover resources in the peer computing system. *See, e.g.,* page 5, lines 4-6; page 5, lines 10-15; page 6, lines 14-18; page 17, lines 3-6; page 23, line 25 - page 24, line 3; page 45, lines 20-30. Page 70, line 22 - page 73, line 13 describes an exemplary peer discovery protocol. The resources that may be discovered include peer nodes. *See, e.g.,* page 5, lines 4-5; page 6, lines 14-18; page 70, lines 23-25. The resources that may be discovered include peer groups. *See, e.g.,* page 6, lines 14-18; page 70, lines 23-25. The

resources that may be discovered further include one or more of pipes, endpoints, services and content. *See, e.g.,* page 6, lines 14-18; page 70, lines 23-25 (core advertisements include pipe, endpoint, services and content advertisements; *see, e.g.,* page 31, line 26 - page 32, line 3).

The peer computing system further includes means for at least a subset of the peer nodes to join or form a peer group with other peer nodes. *See, e.g.,* page 6, lines 19-22; page 24, lines 16-23. Page 77, line 9 - page 81, line 14 describes an exemplary peer membership protocol.

Independent claim 18 is directed to a tangible, computer-readable medium comprising program instructions. *See, e.g.,* page 93, lines 22-27. The program instructions are computer-executable to implement a peer-to-peer platform. *See, e.g.,* page 5, lines 3-8; Abstract (page 108). The peer-to-peer platform is configured for use in a peer-to-peer network to enable the peers to discover each other, to communicate with each other, and to cooperate with each other to form the peer groups. *See, e.g.,* page 5, lines 3-15; page 6, lines 1-9; Abstract (page 108).

The peer-to-peer platform comprises a peer discovery protocol for discovering peers and peer groups in a peer-to-peer network. *See, e.g.,* page 6, lines 14-18; page 23, line 25 - page 24, line 3; page 54, line 5 - page 55, line 27; FIG. 12. Page 70, line 22 - page 73, line 13 describes an exemplary peer discovery protocol.

The peer-to-peer platform further comprises a peer membership protocol for use by the peers in applying for membership in one or more of the peer groups. *See, e.g.,* page 6, lines 19-22; page 24, lines 16-23. Page 77, line 9 - page 81, line 14 describes an exemplary peer membership protocol.

Independent claim 29 is directed to a method for discovering peer nodes on a peer-to-peer network. *See, e.g.,* Abstract. The method comprises a peer node broadcasting a peer discovery message on the peer-to-peer network. *See, e.g.,* page 20,

line 23 - page 21, line 19; page 30, lines 28-30; page 54, lines 5-22; page 61, lines 19-23; FIG. 12; page 71, line 26 - page 72, line 24.

The method further comprises the peer node receiving one or more response messages to the peer discovery message from one or more other peer nodes on the peer-to-peer network. *See, e.g.,* page 30, lines 28-30; page 54, lines 5-28; page 71, line 26 - page 73, line 13. Each of the one or more response messages the response messages may include information about the particular peer node. *See, e.g.,* page 72, line 27 - page 73, line 13 (the response message may include a peer advertisement). A peer advertisement may be used to describe a peer, and may include specific information about the peer, such as its name, peer identifier, registered services and available endpoints. S*ee, e.g.,* FIG. 6; page 47, lines 1-22. The information about the particular peer node is configured for use by the peer node that received the response message in establishing a connection to the particular peer node indicated in the response message. *See, e.g.,* FIG. 6; page 47, lines 1-22. A peer advertisement may include one or more endpoint advertisements that may describe peer network interfaces and/or supported protocols on a peer. S*ee, e.g.,* FIG. 11; page 51, line 14 - page 52, line 8.

The peer discovery message and the response messages are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform. S*ee, e.g.,* FIG. 3; page 52, lines 11-19; page 70, line 22 - page 73, line 13. Broadcasting a peer discovery message on the peer-to-peer network and receiving one or more response messages to the peer discovery message are performed in accordance with the peer discovery protocol. S*ee, e.g.,* FIG. 12; page 70, line 22 - page 73, line 13.

Independent claim 35 is directed to a method for discovering peer groups on a peer-to-peer network. *See, e.g.,* Abstract. The method comprises a peer node broadcasting a peer group discovery message on the peer-to-peer network. *See, e.g.,* page 20, line 23 - page 21, line 19; page 30, lines 28-30; page 54, lines 5-22; page 61, lines 19-23; FIG. 12; page 71, line 26 - page 72, line 24.

The method further comprises the peer node receiving a peer group response message to the peer group discovery message from a peer group on the peer-to-peer network. *See, e.g.,* page 30, lines 28-30; page 54, lines 5-28; page 71, line 26 - page 73, line 13. The peer group response message includes information about the peer group. *See, e.g.,* page 72, line 27 - page 73, line 13 (the response message may include a peer group advertisement). A peer group advertisement may be used to describe, for a peer group, the group specific information (name, peer group identifier, etc.), the membership process, and the provided peer group services. S*ee, e.g.,* FIG. 7; page 47, line 25 - page 48, line 15; page 77, lines 9-21. The information about the peer group is configured for use by the peer node in joining the peer group. The peer group advertisement may describe, for a peer group, the group specific membership process. S*ee, e.g.,* page 47, lines 26-28; page 77, line 9 - page 81, line 14.

The peer group discovery message and the peer group response message are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform. S*ee, e.g.,* FIG. 3; page 52, lines 11-19; page 70, line 22 - page 73, line 13. Broadcasting a peer group discovery message on the peer-to-peer network and receiving a peer group response message to the peer group discovery message are performed in accordance with the peer discovery protocol. S*ee, e.g.,* FIG. 12; page 70, line 22 - page 73, line 13.

Independent claim 38 is directed to a tangible, computer-readable medium comprising program instructions. *See, e.g.,* page 93, lines 22-27. The program instructions are computer-executable to implement a method for discovering peer nodes on a peer-to-peer network, similar to the method of independent claim 29. *See, e.g.,* Abstract.

Independent claim 40 is directed to a tangible, computer-readable medium comprising program instructions. *See, e.g.,* page 93, lines 22-27. The program instructions are computer-executable to implement a method for discovering peer groups on a peer-to-peer network, similar to the method of independent claim 35. *See, e.g.,* Abstract.

The summary above describes various examples and embodiments of the claimed subject matter; however, the claims are not necessarily limited to any of these examples and embodiments. The claims should be interpreted based on the wording of the respective claims.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1-40 stand provisionally rejected under the judiciary created doctrine of obviousness-type double patenting as being unpatentable over claims 1-61 of co-pending Application No. 10/055,649.

2. Claims 1-6, 8-18, 21 and 23-40 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Teodosiu et al. (U.S. Publication 2002/0062375) (hereinafter "Teodosiu") and Badovinatz et al. (U.S. Patent 5,896,503) (hereinafter "Badovinatz").

VII. ARGUMENTS

1. Provisional Double Patenting Rejection

Claims 1-40

The Examiner *provisionally* rejected claims 1-40 under the judiciary created doctrine of obviousness-type double patenting as being unpatentable over claims 1-61 of co-pending Application No. 10/055,649. Appellants traverse this rejection on the grounds that the Examiner has not stated a *prima facie* rejection.

According to MPEP 804.II.B.1, "the analysis employed in an obviousness-type double patenting determination parallels the guidelines for a 35 U.S.C. 103(a) rejection." This section of the MPEP also states that the same "factual inquires … that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are employed when making an obviousness-type double patenting analysis." MPEP 804.II.B.1 also states that the Examiner should list the differences between **each** rejected claim and the claims of the other patent/application, and for **each** difference the Examiner should give the reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim is an obvious variation of the invention defined in a claim of the other patent/application. Just like for a §103 rejection, these reasons should be supported by evidence of record.

In the Final Office Action dated January 30, 2007, the Examiner provided a table that the Examiner claims "shows the similarity of the claimed inventions of application numbers 10/055,645 and 10/055,649." (Specifically, of claim 1 of the instant application and claim 18 of application number 10/055,649). All the Examiner has actually done is taken elements of claim 1 of the instant application and placed them side-by-side with large portions of claim 18 of 10/055,649. As can be seen from the Examiner's table, there are many differences between the claims. The Examiner has not provided any reasons or evidence showing that the differences would be obvious. The Examiner has

given no reason why a person of ordinary skill in the art would conclude that the invention defined in the claim of the instant application is an obvious variation of the invention defined in a claim of the other patent/application. Simply providing a side-by-side table comparing two claims is not a valid reason why a person of ordinary skill in the art would conclude that the invention defined in the claim is an obvious variation of the invention defined in a claim of the other patent/application. The only reason given by the Examiner is that the claims are "in the same context." However, two inventions being in the same context does not establish obviousness. The Examiner has not stated proper grounds for rejection. Nor has the Examiner specifically addressed **each difference** of **each rejected claim** of the instant application compared to the claims of the other application. Instead, the Examiner improperly lumps all the claims together and does not address each specific difference. The Examiner clearly has not met the requirements stated in MPEP 804.II.B.1 to establish a *prima facie* obviousness-type double patenting rejection. Accordingly, Appellants respectfully request removal of the double patenting rejection of claims 1-40.

2. 35 U.S.C. § 103(a) Rejection

As a preliminary matter, the 35 U.S.C. § 103(a) rejection is improper because the Teodosiu reference is not prior art. More specifically, Teodosiu is a published U.S. patent application that was filed on Sep. 13, 2001, after Appellants' priority date of Jan. 22, 2001. Teodosiu does claim the benefit of two provisional applications both filed Nov. 22, 2000. However, the Nov. 22, 2000 filing date can only be used as Teodosiu's 35 U.S.C. § 103(a) prior art date for the subject matter that is common to both the published application and the provisional application. However, the material in Teodosiu relied upon by the Examiner is not actually present in either of Teodosiu's provisional applications. **In fact, examination of Teodosiu's two provisional applications shows that they vary greatly from Teodosiu's published utility application.** The subject matter on which the Examiner is relying on to reject Appellants' claims is not present in one of Teodosiu's provisional applications. Therefore, the rejection is improper. *See, In re Wertheim*, 209 USPQ 554 (CCPA 1981).

In the Final Office Action, the Examiner simply copied large portions of Teodosiu's published utility application and of Teodosiu's provisional application number 60/252,685, and summarily declared that "Teodosiu's provisional application teaches the portions that Examiner relied upon to reject Appellant claimed invention. Both of Teodosiu's Pub. 2002/0062375 and provisional application 60/252,658 provide description of a locator and tracking service for peer-to-peer resources using Resource Naming Service (RNS)." **However, contrary to the Examiner's assertion, review of the portions copied by the Examiner shows that much of the teachings used by the Examiner in the rejection are clearly not present in the provisional applications.**

Specifically, the Examiner has not shown that every portion of Teodosiu relied upon by the Examiner to reject Appellants' claims is found in one of Teodosiu's provisional applications. For example, in the rejection of claims 1-6, 8-18, 21 and 23-40, the Examiner relies on the following paragraphs of Teodosiu: [0016], [0030 - 0037], [0045], [0053], [0073], [0074], [0077], [0094 - 0097]. **None of these paragraphs are found in either of Teodosiu's provisional applications.** These paragraphs from Teodosiu's published application are **not found** in the portion of Teodosiu's provisional application number 60/252,685 copied by the Examiner in the Final Office Action dated January 30, 2007. The Nov. 22, 2000 filing date can only be used as Teodosiu's 35 U.S.C. § 103(a) prior art date for the subject matter that is **common** to both the published application and the provisional application. *See, In re Wertheim*, 209 USPQ 554 (CCPA 1981). **Since portions of Teodosiu relied upon by the Examiner to reject the claims are not common to both Teodosiu's published application and one of Teodosiu's provisional applications, the rejection is improper.**

Additionally, Teodosiu's published application is not entitled to the Nov. 22, 2000 date as a section 103(a) prior art date unless at least one claim of Teodosiu's published application is supported (under 35 U.S.C. § 112) in the provisional application. Under 35 U.S.C. 119(e)(1), a published utility application is not entitled to its provisional application's filing date as a prior art date unless at least one claim of the

published utility application is supported (per 35 U.S.C. § 112) in the provisional application. Since both of Teodosiu's provisional applications are much shorter informal papers as compared to Teodosiu's utility application, it is not at all clear that either one of Teodosiu's provisional applications provide full 35 U.S.C. § 112 support for any of the claims of Teodosiu's published utility application. The rejection is improper unless the Examiner can show that Teodosiu's published application has the necessary claim support in the provisional application to be entitled to the provisional application's filing date as its § 103(a) prior art date. *See also* M.P.E.P. § 2136.03(IV).

In response to this argument, the Examiner has stated that pages 3-4 of Teodosiu's provisional application no. 60/252,658 teach the limitations of claim 1 of Teodosiu's published application. However, a careful review of pages 3-4 of Teodosiu's provisional application no. 60/252,658 fails to reveal that this portion of Teodosiu's provisional application satisfies the written description and enablement requirements of 35 U.S.C. § 112 for claim 1 of Teodosiu's published application. Claim 1 of Teodosiu's published application recites:

> 1. A method comprising:
> receiving a peer resource request at a resource naming service (RNS) server, said peer resource request being received from a peer platform through a networking environment;
> generating a peer resource response based on the peer resource request; and
> returning the peer resource response to the peer platform through the networking environment, said peer resource response to enable the peer platform to access a peer resource corresponding to the peer resource request within the networking environment.

Pages 3-4 of Teodosiu's provisional application no. 60/252,658 do not describe the RNS server "receiving a peer resource request … from a peer platform through a networking environment". Nor do pages 3-4 of Teodosiu's provisional application no. 60/252,658 describe "generating a peer resource response based on the peer resource request". Nor do pages 3-4 of Teodosiu's provisional application no. 60/252,658 describe "returning the peer resource response to the peer platform through the networking environment, said peer resource response to enable the peer platform to

access a peer resource corresponding to the peer resource request within the networking environment." **Since Teodosiu's provisional applications do not satisfies the written description and enablement requirements for any claim of Teodosiu's published application, the provisional applications cannot be used for Teodosiu's prior art date.** *See*, M.P.E.P. § 2136.03(IV). Appellants also note that public PAIR shows that claim 1 of Teodosiu's application has been further amended since publication to include other limitations that are not found in Teodosiu's provisional applications.

The Office has the burden of proof to produce the factual basis for the rejection. *In re Warner*, 154 USPQ 173, 177 (C.C.P.A. 1967), *cert. denied*, 389 U.S. 1057 (1968). **Since the Examiner has not proven that <u>both</u> of the above requirements have been met for Teodosiu's teachings to qualify as prior art, the Examiner has not met this burden of proof and the rejection is improper.**

<u>Claims 1, 2, 10, and 18:</u>

In further regard to claim 1, even if Teodosiu qualified as prior art, the Examiner has failed to state a *prima facie* rejection because the cited references fail to teach or suggest all limitations of Appellants' claimed invention.

Contrary to the Examiner's assertion, the cited art fails to teach or suggest a *peer computing system comprising: a plurality of peer nodes; wherein at least a subset of the peer nodes are configured to participate in a peer discovery protocol to discover other peer nodes.* The Examiner cited Teodosiu, paragraphs [0035]-[0037] in support of this assertion. Teodosiu discloses a Resource Naming Service (RNS) server that receives a request for a resource from a peer, attempts to determine a location or locations for the resource and, if a location or locations are found, returns the location(s) to the requesting peer, which then is responsible for accessing the resource at (one of the) returned location(s). This is clearly disclosed in Teodosiu for FIG. 1 in paragraphs [0035] - [0037]:

> [0035] Each RNS server 130 tracks the current network location (in terms of IP addresses and IP port numbers) and status (on- or off-line) of all peers assigned to that RNS server, as well as the locations and availability of resources among its assigned peers.
>
> [0036] In general, [a peer] accessing a resource is a two step process. First, the resource must be located using the locator service. Second, the resource is actually accessed at the location or set of locations returned by the locator service.
>
> [0037] For a peer 140 within realm 150, the first step in accessing a peer resource involves communicating with the peer's assigned home RNS server 130. The home RNS server 130, possibly in cooperation with registrar 110 and another RNS server 130, determines one or more locations within realm 150 where the resource is expected to be available. In one embodiment, the set of locations returned by the home RNS server 130 to the requesting peer 140 may depend on the current network identity (in particular, the current IP address or IP addresses) of peer 140, on the current traffic load on the realm, as well as on other parameters that are known to the RNS servers 130. It is up to the peer 140 to take the second step to actually access the resource at the provided location(s).

From the above, it is clear that Teodosiu does not teach or suggest *peer nodes that are configured to participate (with other peer nodes) in a peer discovery protocol to discover other peer nodes,* as recited in claim 1. Instead, in the above citation, Teodosiu clearly describes a "two-step process" for accessing a resource that does not involve the initiating peer participating with any other peer node; instead, the process relies on a central RNS server. Teodosiu describes an **RNS server** with which peers must communicate to request locations of resources as a first step in the process. If the RNS server determines one or more locations within a "realm" where the resource is expected to be available, the RNS server returns the locations to the requesting peer. The second step of the process is the peer actually accessing the resource at the provided location(s). Teodosiu states that it is "up to the peer" to take this second step.

Thus, Teodosiu clearly does **not** describe in the provided citation (or elsewhere) peers participating with other peers in a peer discovery protocol to discover other peer nodes. According to Teodosiu, to discover the location of a resource, a peer first communicates with a central RNS server or locator service; Teodosiu does not describe

the peer participating with other peers in said discovery. Teodosiu's teachings of a locator service that depends on a central RNS server is fundamentally different than the notion of *peer nodes that are configured to participate (with other peer nodes) in a peer discovery protocol to discover other peer nodes,* as is recited in claim 1. Furthermore, Appellants can find no teaching or suggestion in Teodosiu that the "resources" that may be located using the RNS server include *peer nodes*.

In further regard to claim 1, the Examiner admits that Teodosiu "fails to teach at least a subset of the peer nodes are configured to participate in a peer membership protocol for joining or forming a peer group with other peer nodes." The Examiner asserts that Badovinatz teaches "a membership protocol for adding modes to become members of a domain in a distributed computing environment which inherently supports peer-to-peer computing." The Examiner goes on to state that it would have been obvious to "combine the teachings of Teodosiu and Badovinatz to allow peer nodes to use peer membership protocol for joining or forming a peer group with other peer nodes because it would manage membership of a domain of computers of a distributed computing environment." However, Appellants note that "to support the conclusion that the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references..." *Ex Parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Int'f 1985).

Appellants note that Badovinatz does not mention peer-to-peer networking at all. Since the Examiner admits that Teodosiu does not teach the subject functionality, it is incumbent upon the Examiner to "present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." However, Badovinatz only describes a mechanism for managing membership of a domain of **processors** in a distributed computing environment. Nowhere does Badovinatz (or any other evidence of record) "expressly or impliedly" suggest that this mechanism should be used in a peer computing system to

enable peer nodes to participate in a peer membership protocol for joining or forming a peer group with other peer nodes. The Examiner states that it would have been obvious to combine Teodosiu's peer computing system with Badovinatz's management of membership of a domain of processors for the advantage of "manag[ing] membership of a domain of computers of a distributed computing environment." However, nowhere do Teodosiu or Badovinatz (or any other evidence of record) "expressly or impliedly" suggest that "manag[ing] membership of a domain of computers of a distributed computing environment" would result from applying Badovinatz's teachings in a peer computing system or would be desirable in Teodosiu's system.

Badovinatz teaches a central server node (e.g., see "name server node which controls the admission of new nodes", col. 1, lines 42-43) as a mechanism for managing membership of a domain of **processors** in a distributed computing environment. By their very nature, peer computing systems typically seek to avoid a central server node. **Thus, Badovinatz actually teaches away from a peer-to-peer system.**

Appellants respectfully assert that "manag[ing] membership of a domain of computers of a distributed computing environment" is not commensurate with the suggested combination of Teodosiu's "peer computing system" and Badovinatz's mechanism for managing membership of a domain of **processors** in a distributed computing environment. Further, as Badovinatz teaches a mechanism that provides the cited advantage for processors in a distributed computing environment, the Examiner provides no reason to combine Teodosiu's "peer computing system" and Badovinatz's mechanism to obtain the cited advantage. In other words, the Examiner has only given a reason to use Badovinatz's system for its own purposes, not a reason to modify Teodosiu's system. Appellants therefore respectfully assert that the Examiner's "line of reasoning" that combining Teodosiu's "peer computing system" with Badovinatz's mechanism to "manage membership of a domain of computers of a distributed computing environment" is not a convincing line of reasoning as to why the claimed invention would have been obvious in light of the teachings of the references. Moreover, the Examiner's reasoning is not supported by the evidence of record.

The Examiner stated that the distributed computing environment of Badovinatz "inherently supports peer-to-peer computing." The Examiner is clearly incorrect. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Badovinatz's system does not necessarily support peer-to-peer computing. In fact, as shown above, Badovinatz's reliance on a central server node specifically teaches away from a peer-to-peer system.

In (24)(C) of the Final Office Action dated January 30, 2007, the Examiner asserts that "In the remarks, Appellant[s] argued in substance that...there is no motivation to combine the teachings of Teodosiu and Badovinatz." On p. 9 of the previous Action, and repeated on p. 5 of the Final Office Action dated January 30, 2007, the Examiner states that it would be obvious to combine the references "because it would manage membership of a domain of computers of a distributed computing environment", citing col. 1, lines 5-8, of Badovinatz in the previous office action. However, as noted above, this is simply a reason to use Badovinatz's system alone, not a reason to modify Teodosiu. Furthermore, Badovinatz's system is specifically not a peer-to-peer system, and actually teaches away from a peer-to-peer system. One of ordinary skill in the art would have no reason to apply the teaching of Badovinatz to Teodosiu.

In the Advisory Action dated April 10, 2007, in response to the Appellants' arguments traversing the rejections of claims 1-6, 8-18, 21 and 23-40 under 35 U.S.C. § 103(a), the Examiner states that "limitations that are argued by Appellant but are not in claimed language are not being considered by Examiner." Since the Examiner has given no indication as to what "limitations…are argued by Appellant but are not in claimed language", the Examiner's assertion is without merit. Moreover, all of Appellants' arguments are based on the exact wording of the claim.

For at least the reasons above, the rejection of claim 1 is not supported by the cited art and removal thereof is respectfully requested.

Claims 3 and 4:

Claim 3 depends from claim 1, and therefore the arguments given above in regard to claim 1 apply equally to claim 3. **In further regard to claim 3, contrary to the Examiner's assertion, the cited art fails to teach or suggest *wherein said peer group is a collection of cooperating peer nodes that provide a common set of services in the peer computing system***. In support of this assertion, the Examiner cites Teodosiu, paragraph [0016], and states "by definition a peer group is a group of peers communicating with each other and paragraph [0016] teaches accessing the same resource." Appellants note that the peer nodes recited in claim 3 that are included in a peer group include features that are beyond the Examiner's broad and circular definition of a "peer group" as "a group of peers communicating with each other". Peer nodes, as recited in claim 3, may be configured to participate in a peer discovery protocol and/or to participate in a peer membership protocol, as recited in claim 1. As noted in reference to claim 1, the cited art does not teach these limitations. A peer node, to join a peer group as recited in claim 3, would do so in accordance with a peer membership protocol, a limitation clearly not indicated by the Examiner's broad and circular definition. Claim 3 clearly recites a "peer group" that is more than simply "a group of peers communicating with each other".

Furthermore, the Examiner asserts that "paragraph [0016] teaches accessing the same resource." In the cited paragraph, Teodosiu states that:

> [I]n the presence of multiple peer copies for the same resource, it is important to be able to select a small set of "best", or "closest", copies for a given request. This ability requires tracking of all equivalent peer locations that have an up-to-date copy of and can serve the cached resource.

Teodosiu, in the above citation, is merely stating that one or more peer locations may have copies of the same cached resource, and may individually "serve" the resources

to satisfy requests for the resources. Appellants assert that Teodosiu, in the above citation or elsewhere, does not teach or suggest the notion of *a common set of **services** that are provided in a peer computing system by peer nodes in a peer group.* Appellants can find no teaching or suggestion in Teodosiu that Teodosiu's "resources" include *services* as recited in claim 3. Teodosiu's "resources" appear to be objects such as data or files that can be copied to other peers. A *service* as recited in claim 3, in contrast, is commonly understood to be other than simply an object such as data or a file. A *service* is commonly understood to be something provided by an entity (such as a peer node or peer group) to perform a function or functions on behalf of other entities (such as other peer nodes). As recited in claim 3, a peer group is a collection of cooperating peer nodes that provide a common set of services in the peer computing system. Each of the set of services provides some *functionality* in the peer computing system. Teodosiu's "resources" are not described as *services*, nor does Teodosiu teach or suggest the notion of a peer group that is a collection of cooperating peer nodes that provide a common set of services in the peer computing system.

For at least the reasons above, the rejection of claim 3 is not supported by the cited art and removal thereof is respectfully requested.

Claim 5:

Claim 5 depends from claim 4, and therefore the arguments given above in regard to claims 1, 3 and 4 apply equally to claim 5. **In further regard to claim 5, contrary to the Examiner's assertion, the cited art fails to teach or suggest a *peer computing system comprising core services, wherein the core services include a discovery service configured for use by member peer nodes in said peer group to discover advertised resources in the peer computing system, wherein the resources include peers and peer groups, and wherein the discovery service uses the discovery protocol and a membership service configured for use by member peer nodes in said peer group to reject or accept group membership applications, wherein the membership service uses the membership protocol.***

In support of the assertion that the cited art teaches a *discovery service configured for use by member peer nodes in said peer group to discover advertised resources in the peer computing system, wherein the resources include peers and peer groups, and wherein the discovery service uses the discovery protocol,* the Examiner cites Teodosiu, paragraph [0053], and states "wherein the peer node has to advertise its presence and resources for the other peer nodes to discover resources." Appellants note that claim 5 depends from claim 4, which depends from claim 3. Claim 3 recites that a *peer group is a collection of cooperating peer nodes that provide a common set of services in the peer computing system*. Claim 4 recites that *the common set of services include one or more core services.* Claim 5 recites that the core services include a *discovery service configured for use by member peer nodes in said peer group to discover advertised resources in the peer computing system.* Thus, claim 5 is reciting a discovery service that is provided by a *collection of cooperating peer nodes*. In contrast, as noted above in reference to claim 1, Teodosiu discloses a Resource Naming Service (RNS) server that receives a request for a resource from a peer, attempts to determine a location or locations for the resource and, if a location or locations are found, returns the location(s) to the requesting peer, which then is responsible for accessing the resource at (one of the) returned location(s). Paragraph [0053] is from a description of FIG. 2, which is describing a resource location method that relies on a central RNS server. **Teodosiu clearly does not teach or suggest the notion of a discovery service that is provided by a *collection of cooperating peer nodes.*** Teodosiu's resource location method, instead, relies on a central RNS server and location service. **Indeed, in relying on an RNS server for resource location, Teodosiu appears to teach away from the notion of a discovery service provided by a collection of cooperating peer nodes.**

In support of the assertion that the cited art teaches a membership service configured for use by member peer nodes in said peer group to reject or accept group membership applications, wherein the membership service uses the membership protocol, the Examiner cites Badovinatz, col. 1, lines 40-67. Appellants note that claim 5 depends

from claim 4, which depends from claim 3. Claim 3 recites that a peer group is a collection of cooperating peer nodes that provide a common set of services in the peer computing system. Claim 4 recites that the common set of services include one or more core services. Claim 5 recites that the core services include a membership service configured for use by member peer nodes in said peer group to reject or accept group membership applications. Thus, claim 5 is reciting a membership service that is provided by a collection of cooperating peer nodes. In contrast, as noted above in reference to claim 1, Badovinatz teaches a central server node (e.g., see "name server node which controls the admission of new nodes", col. 1, lines 42-43) as a mechanism for managing membership of a domain of **processors** in a distributed computing environment. By their very nature, peer computing systems typically seek to avoid a central server node. **Badovinatz clearly does not teach or suggest the notion of a membership service that is provided by a *collection of cooperating peer nodes.*** Badovinatz clearly relies on a central server node. **Thus, Badovinatz actually teaches away from the notion of a membership service provided by a collection of cooperating peer nodes.**

Furthermore, paragraph [0053] of Teodosiu is not found in Teodosiu's provisional applications and thus cannot be used to reject Appellants' claims.

For at least the reasons above, the rejection of claim 5 is not supported by the cited art and removal thereof is respectfully requested.

Claims 6 and 21:

Claim 6 depends from claim 1, and therefore the arguments given above in regard to claim 1 apply equally to claim 6. **In further regard to claim 6, contrary to the Examiner's assertion, the cited art fails to disclose a *peer computing system wherein one or more peer nodes in said peer group are configured to participate in a peer resolver protocol configured for use in sending search queries from one peer group member to another peer group member.*** Examiner cites Teodosiu, paragraph [0094], which in part states:

> …external network traffic 125 is received by gate server 120. Gate server 120 can resolve resource addresses and instruct the senders on how to query the resource locator, or gate server 120 can resolve resource addresses and access the resources on behalf of the senders.

Note also that in Teodosiu, paragraph [0039], the functionality of gate server 120 of FIG. 1 is described:

> [0039] For a client device outside realm 150, external network traffic 125 is directed to realm 150 through gate server 120. Gate server 120, possibly in cooperation with registrar 110 and one or more RNS servers 130, determines one or more peer locations 140 within realm 150 where the resource is expected to be available, in accordance to the resource location process described above. Depending on whether the client device is compatible with the peer(s) hosting the resource, gate server 120 may simply respond with the location(s) and allow the client device to directly access the resource on its own. If the client device is not compatible, gate server 120 may take any number of actions, such as accessing the resource on behalf of the client device and responding as if the gate server were the resource.

Note that, in Figure 1 of Teodosiu, realm 150 is where the peers 140 disclosed by Teodosiu reside, and that the client devices are described as being outside realm 150. In paragraph [0094] and elsewhere, Teodosiu discloses a gate server that can receive external network traffic from client devices external to the "realm", resolve resource addresses, and either instruct the external senders (client devices) on how to query the resource locator, or alternatively access the resources on behalf of the senders. As Teodosiu teaches in [0094] and elsewhere that the gate servers resolve resource addresses for external network traffic from external senders (client devices), it is clear that the gate server disclosed by Teodosiu is not analogous to a peer resolver protocol configured for use in sending search queries from one peer group member to another peer group member.

In (24)(D) on page 18 of the Final Office Action dated January 30, 2007, the Examiner simply provides **a verbatim repetition of what the Examiner stated on page 10 of the previous Office Action,** with the only difference being the reference to pages 3-4 of Teodosiu's provisional application No. 60/252,685. The Examiner asserts

"Teodosiu teaches peer nodes can cache the realm name" and "Teodosiu teaches gate server instructs peer nodes to use its own resource locator service to access the resource in addition to gate server can resolve resource addresses." **However, as shown above, this portion of Teodosiu fails to teach or suggest the limitations of claim 6. Again, the Examiner does not address the specific arguments made above. Furthermore, Appellants can find no teachings of those notions on pages 3-4 of Teodosiu's provisional application. Furthermore, paragraphs [0094 - 0097] of Teodosiu are not found in Teodosiu's provisional application and thus cannot be used to reject Appellants' claims.**

For at least the reasons above, the rejection of claim 6 is not supported by the cited art and removal thereof is respectfully requested.

Claims 8 and 23:

Claim 8 depends from claim 1, and therefore the arguments given above in regard to claim 1 apply equally to claim 8. **In further regard to claim 8, contrary to the Examiner's assertion, the cited art fails to disclose a *peer computing system, wherein one or more peer nodes in said peer group are configured to participate in an endpoint routing protocol for enabling the peer nodes to request peer routing information to reach other peer nodes.*** Teodosiu clearly does not teach or suggest that, to locate resources, peers have to know peer routing information. Instead, Teodosiu, in paragraphs [0036] and [0037], discloses in reference to FIG. 1 a Resource Naming Service (RNS) server that receives a request for a resource from a peer, attempts to determine a location or locations for the resource and, if a location or locations for the resource are found, returns the location(s) to the requesting peer, which then is responsible for accessing the resource at (one of the) returned location(s). Teodosiu does not teach in this citation or elsewhere that the RNS server enables the peer nodes to request peer routing information to reach other peer nodes. Instead, Teodosiu teaches that the RNS server returns location(s) for a requested resource to the requesting peer, which is then responsible for accessing the resource at the provided location(s). Moreover, to locate a resource,

Teodosiu teaches that a peer sends a request to an RNS server (which is not a peer, and thus sending a message to the RNS server would not require knowledge of "peer routing information"), which returns a location or locations for the resource.

In (24)(E) on page 18 of the Final Office Action dated January 30, 2007, the Examiner refers again to paragraphs [0033 - 0037] of Teodosiu's published utility application, and refers to pages 3-4 of Teodosiu's provisional application No. 60/252,685. **However, as shown above, this portion of Teodosiu's published utility application fails to teach or suggest the limitations of claim 8. The Examiner did not address the specific arguments made above.** The Examiner simply asserts that "Teodosiu teaches RNS server keeps current network locations or IP addresses of all peers." Appellants cannot find the teaching "[the] RNS server keeps current network locations or IP addresses of all peers" in the cited portions of the Teodosiu references. Instead, in paragraph [0035], Teodosiu discloses that "Each RNS server 130 tracks the current network location (in terms of IP addresses and IP port numbers)…of all peers assigned to that RNS server." The Examiner further asserts that "Teodosiu teaches peer nodes can access to locate IP addresses to reach other peer nodes." Appellants cannot find that teaching in the cited portions of the Teodosiu references. Instead, Teodosiu teaches that the RNS server returns location(s) for a requested resource to the requesting peer, **which is then responsible for accessing the resource at the provided location(s). Teodosiu does not teach or suggest in this citation or elsewhere that the RNS server enables the peer nodes to request peer routing information to reach other peer nodes.** Requesting and returning a location for a requested resource is clearly not the same as requesting and returning routing information to other peer nodes. Moreover, to locate a resource, Teodosiu teaches that a peer sends a request to an RNS server (which is not a peer, and thus sending a message to the RNS server would not require knowledge of "peer routing information"), which returns a location or locations for the resource. Nothing in Teodosiu teaches or suggests that peer nodes request peer routing information, let alone one or more peer nodes in a peer group being configured to participate in an endpoint routing protocol for enabling the peer nodes to request peer routing information to reach other peer nodes.

Furthermore, paragraphs [0033 - 0037] of Teodosiu are not found in Teodosiu's provisional application and thus cannot be used to reject Appellants' claims.

For at least the reasons above, the rejection of claim 8 is not supported by the cited art and removal thereof is respectfully requested.

Claims 9 and 24:

Claim 9 depends from claim 1, and therefore the arguments given above in regard to claim 1 apply equally to claim 9. **In further regard to claim 9, contrary to the Examiner's assertion, the cited art fails to disclose a peer computing system, wherein at least a subset of the peer nodes are configured to participate in a peer information protocol for enabling the peer nodes to learn about other peer nodes' capabilities and status.** In (24)(F) on page 18 of the Final Office Action dated January 30, 2007, the Examiner simply provides **a verbatim repetition of what the Examiner stated on page 10 of the previous Office Action,** with the only difference being the reference to pages 3-5 of Teodosiu's provisional application No. 60/252,685. The Examiner asserts "Teodosiu teaches peer nodes can identify peer resources within its realm. Moreover, peer platform can publish peer resources by placing the resources in publication directory." Again, Appellants fail to see where, in the cited paragraphs or elsewhere, Teodosiu teaches or suggests that an RNS server enables peer nodes to learn about other peer nodes' capabilities and **status**. The cited portions of Teodosiu do not teach anything about peer nodes participating in a peer information protocol for enabling the peer nodes to learn about other peer nodes' capabilities and status. **Furthermore, paragraphs [0031 - 0032] and [0073] of Teodosiu are not found in Teodosiu's provisional application and thus cannot be used to reject Appellants' claims.**

For at least the reasons above, the rejection of claim 9 is not supported by the cited art and removal thereof is respectfully requested.

Claim 11:

Claim 11 depends from claim 1, and therefore the arguments given above in regard to claim 1 apply equally to claim 11. **In further regard to claim 11, contrary to the Examiner's assertion, the cited art fails to teach or suggest *wherein the resources include one or more of the peer nodes, peer groups, content, services, applications, pipes, and pipe endpoints, wherein the pipes are communications channels between one or more of the peer nodes, the services, and the applications in the peer-to-peer environment, and wherein the pipe endpoints are network interfaces on the peer nodes that are configured to be bound to the pipes to establish the communications channels.*** The Examiner relies on Teodosiu, paragraph [0077] and FIG. 3, in support of this assertion.

Appellants note that claim 11 depends from claim 10, which recites *wherein each of the plurality of peer nodes is further configured to use an advertisement format for describing and publishing advertisements for resources in a peer-to-peer environment.* Thus, the resources mentioned in claim 11 refer to the resources for which advertisements may be published in the peer-to-peer environment in accordance with the advertisement format. Appellants can find nothing in the cited sections of Teodosiu that teaches or suggests the notion of publishing advertisements for *one or more of peer nodes, peer groups, content, services, applications, pipes, and pipe endpoints.* Nor can Appellants find any teaching or suggestion in the cited selection or elsewhere in Teodosiu that the "resources" that may be located using the RNS server include *peer nodes, peer groups, content, services, applications, pipes, and pipe endpoints*. Specifically, Appellants can find no teaching or suggestion in Teodosiu that *peer nodes, peer groups, pipes, and pipe endpoints* are considered "resources" that may be advertised and located using Teodosiu's RNS server.

Furthermore, Appellants can find nothing in the cited art that teaches or suggests the notion of *pipes* that are defined as *communications channels between one or more of*

the peer nodes, the services, and the applications in the peer-to-peer environment, or the notion that *pipe endpoints* are *network interfaces on the peer nodes that are configured to be bound to the pipes to establish the communications channels*. FIG. 3 of Teodosiu, cited by the Examiner, simply illustrates the notion of various "traffic" coming in and out of a peer, and does not teach or suggest the notion of pipes and pipe endpoints as recited in claim 11. Teodosiu clearly does not teach or suggest the notion of advertisements for pipes and pipe endpoints as recited in claim 11.

Furthermore, paragraph [0077] and FIG. 3 of Teodosiu is not found in Teodosiu's provisional applications and thus cannot be used to reject Appellants' claims

For at least the reasons above, the rejection of claim 11 is not supported by the cited art and removal thereof is respectfully requested.

Claim 12:

In further regard to claim 12, even if Teodosiu qualified as prior art, the Examiner has failed to state a *prima facie* rejection because the cited art fails to teach all limitations of Appellants' claimed invention.

Contrary to the Examiner's assertion, the cited art fails to teach or suggest a *peer computing system comprising: means for at least a subset of the peer nodes to discover resources in the peer computing system, wherein the resources include peer nodes and peer groups, and wherein the resources further include one or more of pipes, endpoints, services and content.* In the Examiner's arguments directed at claim 11, the Examiner relies on Teodosiu, paragraph [0077] and FIG. 3, in support of the assertion that Teodosiu teaches that the resources include peer nodes, peer groups, pipes, endpoints, services and content. Appellants find any teaching or suggestion in the citations or elsewhere in Teodosiu that the "resources" that may be located using the RNS server include peer nodes, peer groups, content, services, applications, pipes, and

endpoints. Specifically, Appellants can find no teaching or suggestion in Teodosiu that peer nodes, peer groups, pipes, and endpoints are considered "resources" that may be located using Teodosiu's RNS server. Furthermore, Appellants can find nothing in the cited art that teaches or suggests the notion of pipes and endpoints. FIG. 3 of Teodosiu, cited by the Examiner, simply illustrates the notion of various "traffic" coming in and out of a peer, and does not teach or suggest the notion of pipes and endpoints as recited in claim 12.

Contrary to the Examiner's assertion, the cited art fails to teach or suggest a *peer computing system comprising: means for at least a subset of the peer nodes to join or form a peer group with other peer nodes.* In arguments directed at claim 1, the Examiner admits that Teodosiu "fails to teach at least a subset of the peer nodes are configured to participate in a peer membership protocol for joining or forming a peer group with other peer nodes." The Examiner asserts that Badovinatz teaches "a membership protocol for adding modes to become members of a domain in a distributed computing environment which inherently supports peer-to-peer computing." The Examiner goes on to state that it would have been obvious to "combine the teachings of Teodosiu and Badovinatz to allow peer nodes to use peer membership protocol for joining or forming a peer group with other peer nodes because it would manage membership of a domain of computers of a distributed computing environment." However, Appellants note that "to support the conclusion that the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination or the examiner **must present a convincing line of reasoning** as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references..." *Ex Parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Int'f 1985).

Appellants note that Badovinatz does not mention peer-to-peer networking at all. Since the Examiner admits that Teodosiu does not teach the subject functionality, it is incumbent upon the Examiner to "present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the

teachings of the references." However, Badovinatz only describes a mechanism for managing membership of a domain of **processors** in a distributed computing environment. Nowhere does Badovinatz "expressly or impliedly" suggest that this mechanism should be used in a peer computing system to enable peer nodes to participate in a peer membership protocol for joining or forming a peer group with other peer nodes. The Examiner states that it would have been obvious to combine Teodosiu's peer computing system with Badovinatz's management of membership of a domain of processors for the advantage of "manag[ing] membership of a domain of computers of a distributed computing environment." However, nowhere do Teodosiu or Badovinatz "expressly or impliedly" suggest that "manag[ing] membership of a domain of computers of a distributed computing environment" would result from applying Badovinatz's teachings in a peer computing system or would be desirable in Teodosiu's system.

Badovinatz teaches a central server node (e.g., see "name server node which controls the admission of new nodes", col. 1, lines 42-43) as a mechanism for managing membership of a domain of **processors** in a distributed computing environment. By their very nature, peer computing systems typically seek to avoid a central server node. **Thus, Badovinatz actually teaches away from a peer-to-peer system.**

Appellants respectfully assert that "manag[ing] membership of a domain of computers of a distributed computing environment" is not commensurate with the suggested combination of Teodosiu's "peer computing system" and Badovinatz's mechanism for managing membership of a domain of **processors** in a distributed computing environment. Further, as Badovinatz teaches a mechanism that provides the cited advantage for processors in a distributed computing environment, the Examiner provides no motivation to combine Teodosiu's "peer computing system" and Badovinatz's mechanism to obtain the cited advantage. In other words, the Examiner has only given a reason to use Badovinatz's system alone, not a reason to modify Teodosiu's system. Appellants therefore respectfully assert that the Examiner's "line of reasoning" that combining Teodosiu's "peer computing system" with Badovinatz's mechanism to "manage membership of a domain of computers of a distributed computing environment"

is not a convincing line of reasoning as to why the claimed invention would have been obvious in light of the teachings of the references.

The Examiner stated that the distributed computing environment of Badovinatz "inherently supports peer-to-peer computing." The Examiner is clearly incorrect. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Badovinatz's system does not necessarily support peer-to-peer computing. In fact, as shown above, Badovinatz's reliance on a central server node specifically teaches away from a peer-to-peer system.

In (24)(C) of the Final Office Action dated January 30, 2007, the Examiner asserts that "In the remarks, Appellant[s] argued in substance that...there is no motivation to combine the teachings of Teodosiu and Badovinatz." On p. 9 of the previous Action, and repeated on p. 5 of the Final Office Action, the Examiner states that it would be obvious to combine the references "because it would manage membership of a domain of computers of a distributed computing environment", citing col. 1, lines 5-8, of Badovinatz in the previous office action. However, as noted above, this is simply a reason to use Badovinatz's system alone, not a reason to modify Teodosiu. Furthermore, Badovinatz's system is specifically not a peer-to-peer system, and actually teaches away from a peer-to-peer system. One of ordinary skill in the art would have no reason to apply the teaching of Badovinatz to Teodosiu.

In (24)(B) of the Final Office Action dated January 30, 2007, the Examiner asserts that "In the remarks, Appellant[s] argued in substance that...the prior art does not teach peer-to-peer computing." Appellants have not so argued. Appellants have noted that the Badovinatz reference does not mention peer-to-peer networking at all, and proceeded from there to make further arguments, as noted above.

In the Advisory Action dated April 10, 2007, in response to the Appellants' arguments traversing the rejections of claims 1-6, 8-18, 21 and 23-40 under 35 U.S.C. § 103(a), the Examiner asserted that the Appellants' arguments "are not deemed to be persuasive", and "In addition, office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure…Therefore, limitations that are argued by Appellant but are not in claimed language are not being considered by Examiner." Since the Examiner has given no indication as to what "limitations…are argued by Appellant but are not in claimed language", the Examiner's assertion is without merit. **The Examiner did not provide any substantive responses to the Appellants' arguments in the Advisory Action.**

Contrary to the Examiner's assertion, the cited art fails to teach or suggest *wherein said peer group is a collection of cooperating peer nodes that provide a common set of services in the peer computing system*. In arguments directed at claim 3, the Examiner cites Teodosiu, paragraph [0016], and states "by definition a peer group is a group of peers communicating with each other and paragraph [0016] teaches accessing the same resource." In the cited paragraph, Teodosiu states that:

> [I]n the presence of multiple peer copies for the same resource, it is important to be able to select a small set of "best", or "closest", copies for a given request. This ability requires tracking of all equivalent peer locations that have an up-to-date copy of and can serve the cached resource.

Teodosiu, in the above citation, is merely stating that one or more peer locations may have copies of the same cached resource, and may individually "serve" the resources to satisfy requests for the resources. Appellants assert that Teodosiu, in the above citation or elsewhere, does not teach or suggest the notion of *a common set of **services** that are provided in a peer computing system by peer nodes in a peer group.* Appellants can find no teaching or suggestion in Teodosiu that Teodosiu's "resources" include *services* as recited in claim 12. Teodosiu's "resources" appear to be objects such as data or files that can be copied to other peers. A *service* as recited in claim 12, in contrast, is commonly understood to be other than simply an object such as data or a file. A *service* is commonly understood to be something provided by an entity (such as a peer node or

peer group) to perform a function or functions on behalf of other entities (such as other peer nodes). As recited in claim 12, a peer group is a collection of cooperating peer nodes that provide a common set of services in the peer computing system. Each of the set of services provides some *functionality* in the peer computing system. Teodosiu's "resources" are not described as *services*, nor does Teodosiu teach or suggest the notion of a peer group that is a collection of cooperating peer nodes that provide a common set of services in the peer computing system.

In further regard to claim 12, even if Teodosiu qualified as prior art, the Examiner has failed to state a *prima facie* rejection for claim 12. The Examiner only states that claim 12 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 12 has a different scope than claims 1-6 and 8-11. **Claim 12 recites a combination of limitations that are not found in claims 1-6 and 8-11. Since the Examiner has failed to address the differences between the claims, the Examiner's rejection of claim 12 is improper.**

For at least the reasons above, the rejection of claim 12 is not supported by the cited art and removal thereof is respectfully requested.

Claim 13:

Claim 13 depends from claim 12, and therefore the arguments given above in regard to claim 12 apply equally to claim 13. **In further regard to claim 13, the cited art does not teach or suggest *means for member peer nodes in said peer group to reject or accept peer group membership applications.*** In arguments directed at claim 5, the Examiner cites Badovinatz, col. 1, lines 40-67. Claim 13 is reciting means for member peer nodes in a peer group to reject or accept peer group membership applications. In contrast, Badovinatz teaches a central server node (e.g., see "name server node which controls the admission of new nodes", col. 1, lines 42-43) as a mechanism for managing membership of a domain of **processors** in a distributed computing environment. By their very nature, peer computing systems typically seek to avoid a

central server node. **Badovinatz clearly does not teach or suggest the notion of means for member peer nodes in a peer group to reject or accept peer group membership applications.** Badovinatz clearly relies on a central server node. **Thus, Badovinatz actually teaches away from the notion of means for member peer nodes in a peer group to reject or accept peer group membership applications.**

Furthermore, paragraph [0053] of Teodosiu is not found in Teodosiu's provisional applications and thus cannot be used to reject Appellants' claims.

For at least the reasons above, the rejection of claim 13 is not supported by the cited art and removal thereof is respectfully requested.

Claim 14:

Claim 14 depends from claim 12, and therefore the arguments given above in regard to claim 12 apply equally to claim 14. **In further regard to claim 14, the cited art does not teach or suggest *means for member peer nodes in said peer group to send search queries from one peer group member to another peer group member.*** In arguments directed at claim 6, the Examiner cites Teodosiu, paragraph [0094], which in part states:

> …external network traffic 125 is received by gate server 120. Gate server 120 can resolve resource addresses and instruct the senders on how to query the resource locator, or gate server 120 can resolve resource addresses and access the resources on behalf of the senders.

Note also that in Teodosiu, paragraph [0039], the functionality of gate server 120 of FIG. 1 is described:

> [0039] For a client device outside realm 150, external network traffic 125 is directed to realm 150 through gate server 120. Gate server 120, possibly in cooperation with registrar 110 and one or more RNS servers 130, determines one or more peer locations 140 within realm 150 where the resource is expected to be available, in accordance to the resource location process described above. Depending on whether the client device is compatible with the peer(s) hosting the resource, gate server 120 may simply respond with the location(s) and allow the client device to directly

> access the resource on its own. If the client device is not compatible, gate server 120 may take any number of actions, such as accessing the resource on behalf of the client device and responding as if the gate server were the resource.

Note that, in Figure 1 of Teodosiu, realm 150 is where the peers 140 disclosed by Teodosiu reside, and that the client devices are described as being outside realm 150. In paragraph [0094] and elsewhere, Teodosiu discloses a gate server that can receive external network traffic from client devices external to the "realm", resolve resource addresses, and either instruct the external senders (client devices) on how to query the resource locator, or alternatively access the resources on behalf of the senders. As Teodosiu teaches in [0094] and elsewhere that the gate servers resolve resource addresses for external network traffic from external senders (client devices), it is clear that the gate server disclosed by Teodosiu is not analogous to means for member peer nodes in said peer group to send search queries from one peer group member to another peer group member.

In (24)(D) on page 18 of the Final Office Action dated January 30, 2007, the Examiner simply provides **a verbatim repetition of what the Examiner stated on page 10 of the previous Office Action,** with the only difference being the reference to pages 3-4 of Teodosiu's provisional application No. 60/252,685. The Examiner asserts "Teodosiu teaches peer nodes can cache the realm name" and "Teodosiu teaches gate server instructs peer nodes to use its own resource locator service to access the resource in addition to gate server can resolve resource addresses." **However, as shown above, this portion of Teodosiu fails to teach or suggest the limitations of claim 14. Again, the Examiner does not address the specific arguments made above. Furthermore, Appellants can find no teachings of those notions on pages 3-4 of Teodosiu's provisional application. Furthermore, paragraphs [0094 - 0097] of Teodosiu are not found in Teodosiu's provisional application and thus cannot be used to reject Appellants' claims.**

For at least the reasons above, the rejection of claim 14 is not supported by the

cited art and removal thereof is respectfully requested.

Claim 15:

Claim 15 depends from claim 12, and therefore the arguments given above in regard to claim 12 apply equally to claim 15. **In further regard to claim 15, the cited art does not teach or suggest *means for member peer nodes in said peer group to bind to a pipe endpoint.*** In regard to claim 15, the Examiner originally only referred to the rejection of claims 1-6 and 8-11. However, none of claims 1-6 and 8-11 recite means for member peer nodes in said peer group to bind to a pipe endpoint. In (24)(G) on page 18 of the Final Office Action dated January 30, 2007, the Examiner asserts "Teodosiu teaches peer nodes within realm access peer resources on the network (page 3, paragraph [0037], or pages 3-4 of Teodosiu's provisional application)." Simply stating that peer nodes within a realm may access peer resources on the network clearly does not teach or suggest anything like *means for member peer nodes in said peer group to bind to a pipe endpoint.* Teodosiu, in paragraphs [0036] and [0037], discloses in reference to FIG. 1 a Resource Naming Service (RNS) server that receives a request for a resource from a peer, attempts to determine a location or locations for the resource and, if a location or locations for the resource are found, returns the location(s) to the requesting peer, which then is responsible for accessing the resource at (one of the) returned location(s). **Teodosiu is silent on how the peer actually accesses the resource. The cited portions of Teodosiu do not teach or suggest anything like the notions of pipe endpoints, binding to pipe endpoints, or means to bind to pipe endpoints.** Appellants can find nothing in the cited portions of Teodosiu that teach or suggest anything like what is recited in claim 15. **Furthermore, in the Office Action of April 4, 2005, the Examiner acknowledged that Teodosiu does not teach binding to a pipe endpoint.**

Furthermore, paragraph [0037] of Teodosiu is not found in Teodosiu's provisional applications and thus cannot be used to reject Appellants' claims.

For at least the reasons above, the rejection of claim 15 is not supported by the

cited art and removal thereof is respectfully requested.

Claim 16:

Claim 16 depends from claim 12, and therefore the arguments given above in regard to claim 12 apply equally to claim 16. **In further regard to claim 16, contrary to the Examiner's assertion, the cited art fails to disclose *means for member peer nodes in said peer group to request peer routing information to reach other peer nodes.*** Teodosiu clearly does not teach or suggest that, to locate resources, peers have to know peer routing information. Instead, Teodosiu, in paragraphs [0036] and [0037], discloses in reference to FIG. 1 a Resource Naming Service (RNS) server that receives a request for a resource from a peer, attempts to determine a location or locations for the resource and, if a location or locations for the resource are found, returns the location(s) to the requesting peer, which then is responsible for accessing the resource at (one of the) returned location(s). Teodosiu does not teach in this citation or elsewhere that the RNS server enables the peer nodes to request peer routing information to reach other peer nodes. Instead, Teodosiu teaches that the RNS server returns location(s) for a requested resource to the requesting peer, which is then responsible for accessing the resource at the provided location(s). Moreover, to locate a resource, Teodosiu teaches that a peer sends a request to an RNS server (which is not a peer, and thus sending a message to the RNS server would not require knowledge of "peer routing information"), which returns a location or locations for the resource.

In arguments directed at claim 8, in (24)(E) on page 18 of the Final Office Action dated January 30, 2007, the Examiner refers again to paragraphs [0033 - 0037] of Teodosiu's published utility application, and refers to pages 3-4 of Teodosiu's provisional application No. 60/252,685. **However, as shown above, this portion of Teodosiu's published utility application fails to teach or suggest the limitations of claim 16. The Examiner did not address the specific arguments made above.** The Examiner simply asserts that "Teodosiu teaches RNS server keeps current network locations or IP addresses of all peers." Appellants cannot find the teaching "[the] RNS

server keeps current network locations or IP addresses of all peers" in the cited portions of the Teodosiu references. Instead, in paragraph [0035], Teodosiu discloses that "Each RNS server 130 tracks the current network location (in terms of IP addresses and IP port numbers)…of all peers assigned to that RNS server." The Examiner further asserts that "Teodosiu teaches peer nodes can access to locate IP addresses to reach other peer nodes." Appellants cannot find that teaching in the cited portions of the Teodosiu references. Instead, Teodosiu teaches that the RNS server returns location(s) for a requested resource to the requesting peer, **which is then responsible for accessing the resource at the provided location(s). Teodosiu does not teach or suggest in this citation or elsewhere that the RNS server enables the peer nodes to request peer routing information to reach other peer nodes.** Requesting and returning a location for a requested resource is clearly not the same as requesting and returning routing information to other peer nodes. Moreover, to locate a resource, Teodosiu teaches that a peer sends a request to an RNS server (which is not a peer, and thus sending a message to the RNS server would not require knowledge of "peer routing information"), which returns a location or locations for the resource. Nothing in Teodosiu teaches or suggests that peer nodes request peer routing information, let alone *means for member peer nodes in a peer group to request peer routing information to reach other peer nodes*.

Furthermore, paragraphs [0033 - 0037] of Teodosiu are not found in Teodosiu's provisional application and thus cannot be used to reject Appellants' claims.

For at least the reasons above, the rejection of claim 16 is not supported by the cited art and removal thereof is respectfully requested.

Claim 17:

Claim 17 depends from claim 12, and therefore the arguments given above in regard to claim 12 apply equally to claim 17. **In further regard to claim 17, contrary to the Examiner's assertion, the cited art fails to disclose *means for the plurality of***

peer nodes to request information about other peer nodes' capabilities and status. In arguments directed at claim 9, in (24)(F) on page 18 of the Final Office Action dated January 30, 2007, the Examiner simply provides **a verbatim repetition of what the Examiner stated on page 10 of the previous Office Action,** with the only difference being the reference to pages 3-5 of Teodosiu's provisional application No. 60/252,685. The Examiner asserts "Teodosiu teaches peer nodes can identify peer resources within its realm. Moreover, peer platform can publish peer resources by placing the resources in publication directory." Again, Appellants fail to see where, in the cited paragraphs or elsewhere, Teodosiu teaches or suggests that an RNS server enables peer nodes to learn about other peer nodes' capabilities and **status**. The cited portions of Teodosiu do not teach anything about means for the plurality of peer nodes to request information about other peer nodes' capabilities and status. **Furthermore, paragraphs [0031 - 0032] and [0073] of Teodosiu are not found in Teodosiu's provisional application and thus cannot be used to reject Appellants' claims.**

For at least the reasons above, the rejection of claim 17 is not supported by the cited art and removal thereof is respectfully requested.

Claim 25

Claim 25 depends from claim 18, and therefore the arguments given above in regard to claim 1 and 18 apply equally to claim 25. **Furthermore, the cited art does not teach or suggest that *the peer-to-peer platform further comprises a peer advertisement format configured for use in advertising the peers in the peer-to-peer network, wherein said discovering peers returns one or more peer advertisements formatted in accordance with the peer advertisement format.*** The Examiner only states that claim 25 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 25 has a different scope than claims 1-6 and 8-11. Claim 25 recites a combination of limitations that are not found in claims 1-6 and 8-11. Therefore, the Examiner has failed to state a *prima facie* rejection for claim 25.

For at least the reasons above, the rejection of claim 25 is not supported by the cited art and removal thereof is respectfully requested.

Claim 26

Claim 26 depends from claim 18, and therefore the arguments given above in regard to claim 1 and 18 apply equally to claim 26. **Furthermore, the cited art does not teach or suggest that *the peer-to-peer platform further comprises a peer group advertisement format configured for use in advertising the peer groups in the peer-to-peer network, wherein said discovering peer groups returns one or more peer group advertisements formatted in accordance with the peer group advertisement format.*** The Examiner only states that claim 26 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 26 has a different scope than claims 1-6 and 8-11. Claim 26 recites a combination of limitations that are not found in claims 1-6 and 8-11. Therefore, the Examiner has failed to state a *prima facie* rejection for claim 26.

For at least the reasons above, the rejection of claim 26 is not supported by the cited art and removal thereof is respectfully requested.

Claim 27

Claim 27 depends from claim 18, and therefore the arguments given above in regard to claim 1 and 18 apply equally to claim 27. **Furthermore, the cited art does not teach or suggest that *the peer discovery protocol is further configured for discovering one or more of pipes, endpoints, services and content in the peer-to-peer network.*** The Examiner only states that claim 27 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 27 has a different scope than claims 1-6 and 8-11. Claim 27 recites a combination of limitations that are not found in claims 1-6 and 8-11. Therefore, the Examiner has failed to state a *prima facie* rejection for claim 27.

For at least the reasons above, the rejection of claim 27 is not supported by the cited art and removal thereof is respectfully requested.

Claim 28

Claim 28 depends from claim 27, and therefore the arguments given above in regard to claim 1, 18 and 27 apply equally to claim 28. **Furthermore, the cited art does not teach or suggest that** ***the peer-to-peer platform further comprises one or more of: a pipe advertisement format configured for use in advertising pipes in the peer-to-peer network, wherein said discovering pipes returns one or more pipe advertisements formatted in accordance with the pipe advertisement format; an endpoint advertisement format configured for use in advertising endpoints in the peer-to-peer network, wherein said discovering endpoints returns one or more endpoint advertisements formatted in accordance with the endpoint advertisement format; a service advertisement format configured for use in advertising services provided by the peers in the peer-to-peer network, wherein said discovering services returns one or more service advertisements formatted in accordance with the service advertisement format; and a content advertisement format configured for use in advertising the content in the peer-to-peer network, wherein said discovering content returns one or more content advertisements formatted in accordance with the content advertisement format.*** The Examiner only states that claim 28 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 28 has a different scope than claims 1-6 and 8-11. Claim 28 recites a combination of limitations that are not found in claims 1-6 and 8-11. Therefore, the Examiner has failed to state a *prima facie* rejection for claim 28.

For at least the reasons above, the rejection of claim 28 is not supported by the cited art and removal thereof is respectfully requested.

Claim 29 and 38

In further regard to claim 29, even if Teodosiu qualified as prior art, the Examiner has failed to state a *prima facie* rejection because the cited art fails to teach all limitations of Appellants' claimed invention.

The cited art fails to teach or suggest a method for discovering peer nodes on a peer-to-peer network, comprising: *a peer node broadcasting a peer discovery message on the peer-to-peer network.* In (24)(H) on page 18 of the Final Office Action dated January 30, 2007, the Examiner asserts "Teodosiu teaches peer nodes can use a variety of network transmission protocols including broadcasting peer discovery message or peer group discovery message on the peer-to-peer network (Fig 1; page 9, paragraph [0124], or pages 3-4 of Teodosiu's provisional application)." Paragraph [0124] states in part:

> …the elements in realm 150 communicate with one another using any of a variety of network transmission protocols, such as the User Datagram Protocol (UDP) or the Transmission Control Protocol (TCP), and any of a variety of application protocols, such as a proprietary protocol, the Hypertext Transfer Protocol (HTTP), the File Transfer Protocol (FTP), or the like.

Appellants note that supporting a network transmission protocol is distinctly different than the notion of broadcasting particular messages (e.g., a peer discovery message) as recited in claim 29. A specific message is not a transmission protocol. A specific message may be broadcast using a variety of network transmission protocols. The cited portion of Teodosiu does not teach or suggest the notions of *broadcasting a peer discovery message on a peer-to-peer network*. Moreover, Appellants can find no teaching or suggestion of a peer discovery message in the prior art. In any case, disclosing that peer nodes can use a variety of network transmission protocols does not teach or suggest the transmission of particular messages over those protocols.

Furthermore, paragraph [0124] of Teodosiu is not found in Teodosiu's provisional applications and thus cannot be used to reject Appellants' claims. More specifically, Appellants can find nothing in the cited portion of Teodosiu's provisional

application that supports the notion that "peer nodes can use a variety of network transmission protocols".

In further regard to claim 29, the cited art fails to teach or suggest *the peer node receiving one or more response messages to the peer discovery message from one or more other peer nodes on the peer-to-peer network, wherein the response messages each include information about the particular peer node, wherein the information is configured for use by the peer node in establishing a connection to the particular peer node.* Teodosiu, in paragraphs [0037], discloses:

> [0037] For a peer 140 within realm 150, the first step in accessing a peer resource involves communicating with the peer's assigned home RNS server 130. The home RNS server 130, possibly in cooperation with registrar 110 and another RNS server 130, determines one or more locations within realm 150 where the resource is expected to be available. In one embodiment, the set of locations **returned by the home RNS server 130 to the requesting peer 140** may depend on the current network identity (in particular, the current IP address or IP addresses) of peer 140, on the current traffic load on the realm, as well as on other parameters that are known to the RNS servers 130. It is up to the peer 140 to take the second step to actually access the resource at the provided location(s).

It is clear from the above that Teodosiu teaches that "response messages" to a "discovery requests" are received from an RNS server, and not from *one or more other peer nodes on the peer-to-peer network.* Teodosiu teaches that, to access a peer resource, a peer communicates with a home RNS server, which returns locations to the requesting peer, if found. Teodosiu does not teach or suggest that a peer broadcasts a message on a peer-to-peer network, and receives one or more response messages to the broadcast messages from one or more peer nodes on the peer-to-peer network.

In further regard to claim 29, the cited art fails to teach or suggest *wherein the peer discovery message and the response messages are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform, and wherein said broadcasting and said receiving are performed in accordance with the peer discovery*

protocol. In arguments directed to claim 1, the Examiner cited Teodosiu, paragraphs [0035]-[0037] in support of the assertion that Teodosiu teaches a peer discovery protocol. Teodosiu discloses a Resource Naming Service (RNS) server that receives a request for a resource from a peer, attempts to determine a location or locations for the resource and, if a location or locations are found, returns the location(s) to the requesting peer, which then is responsible for accessing the resource at (one of the) returned location(s). Teodosiu does not teach or suggest a *peer discovery protocol comprised in a peer-to-peer platform* that is used in broadcasting request messages to peers on a peer-to-peer network and receiving response messages from peers on the peer-to-peer network, as is recited in claim 29. Instead, in the above citation, Teodosiu clearly describes a "two-step process" for accessing a resource that does not involve the initiating peer participating with any other peer node in a peer discovery protocol; instead, the process relies on a central RNS server. Teodosiu describes an **RNS server** with which peers must communicate to request locations of resources as a first step in the process. If the RNS server determines one or more locations within a "realm" where the resource is expected to be available, the RNS server returns the locations to the requesting peer. The second step of the process is the peer actually accessing the resource at the provided location(s). Teodosiu states that it is "up to the peer" to take this second step.

Thus, Teodosiu clearly does **not** teach or suggest in the provided citation (or elsewhere) a peer performing broadcasting of request messages to other peers and receiving response messages from other peers, and furthermore does not describe performing said broadcasting and receiving in accordance with a peer discovery protocol or that the request messages and response messages are formatted in accordance with such a peer discovery protocol. According to Teodosiu, to discover the location of a resource, a peer first communicates with a central RNS server or locator service, and receives responses from the central RNS server. Teodosiu's teachings of a locator service that depends on a central RNS server is fundamentally different than what is recited in claim 29.

Furthermore, paragraphs [0035 - 0037] of Teodosiu are not found in Teodosiu's provisional application and thus cannot be used to reject Appellants' claims.

In the Advisory Action dated April 10, 2007, in response to the Appellants' arguments traversing the rejections of claims 1-6, 8-18, 21 and 23-40 under 35 U.S.C. § 103(a), the Examiner asserted that the Appellants' arguments "are not deemed to be persuasive", and "In addition, office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure…Therefore, limitations that are argued by Appellant but are not in claimed language are not being considered by Examiner." Since the Examiner has given no indication as to what "limitations…are argued by Appellant but are not in claimed language", the Examiner's assertion is without merit. **The Examiner did not provide any substantive responses to the Appellants' arguments in the Advisory Action.**

In further regard to claim 29, even if Teodosiu qualified as prior art, the Examiner has failed to state a *prima facie* rejection for claim 29. The Examiner only states that claim 29 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 29 has a different scope than claims 1-6 and 8-11. **Claim 29 recites a combination of limitations that are not found in claims 1-6 and 8-11. Since the Examiner has failed to address the differences between the claims, the Examiner's rejection of claim 29 is improper.**

For at least the reasons above, the rejection of claim 29 is not supported by the cited art and removal thereof is respectfully requested.

Claim 30 and 39

Claim 30 depends from claim 29, and therefore the arguments given above in regard to claim 29 apply equally to claim 30. **Furthermore, the cited art does not teach or suggest *the peer node broadcasting a peer group discovery message on the***

peer-to-peer network; and the peer node receiving one or more peer group response messages to the peer group discovery message from one or more peer groups on the peer-to-peer network, wherein the peer group response messages each include information about the particular peer group, wherein the information is configured for use by the peer node in joining the particular peer group; and wherein the peer group discovery message and the peer group response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a peer group discovery message and said receiving one or more peer group response messages are performed in accordance with the peer discovery protocol. The Examiner only states that claim 30 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 30 has a different scope than claims 1-6 and 8-11. Claim 30 recites a combination of limitations that are not found in claims 1-6 and 8-11. Therefore, the Examiner has failed to state a *prima facie* rejection for claim 30.

For at least the reasons above, the rejection of claim 30 is not supported by the cited art and removal thereof is respectfully requested.

Claim 31

Claim 31 depends from claim 29, and therefore the arguments given above in regard to claim 29 apply equally to claim 31. **Furthermore, the cited art does not teach or suggest** ***the peer node broadcasting a pipe discovery message on the peer-to-peer network; and the peer node receiving one or more pipe response messages to the pipe discovery message from one or more peers on the peer-to-peer network, wherein the pipe response messages each include information about the particular pipe, wherein the information is configured for use by the peer node in binding to the particular pipe; and wherein the pipe discovery message and the pipe response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a pipe discovery message and said receiving one or more pipe response messages are performed in accordance with the peer discovery protocol.*** The Examiner

only states that claim 31 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 31 has a different scope than claims 1-6 and 8-11. Claim 31 recites a combination of limitations that are not found in claims 1-6 and 8-11. Therefore, the Examiner has failed to state a *prima facie* rejection for claim 31.

For at least the reasons above, the rejection of claim 31 is not supported by the cited art and removal thereof is respectfully requested.

Claim 32

Claim 32 depends from claim 29, and therefore the arguments given above in regard to claim 29 apply equally to claim 32. **Furthermore, the cited art does not teach or suggest *the peer node broadcasting an endpoint discovery message on the peer-to-peer network; and the peer node receiving one or more endpoint response messages to the endpoint discovery message from one or more peers on the peer-to-peer network, wherein the endpoint response messages each include information about the particular endpoint, wherein the information is configured for use by the peer node in binding to the particular endpoint; and wherein the endpoint discovery message and the endpoint response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting an endpoint discovery message and said receiving one or more endpoint response messages are performed in accordance with the peer discovery protocol.*** The Examiner only states that claim 32 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 32 has a different scope than claims 1-6 and 8-11. Claim 32 recites a combination of limitations that are not found in claims 1-6 and 8-11. Therefore, the Examiner has failed to state a *prima facie* rejection for claim 32.

For at least the reasons above, the rejection of claim 32 is not supported by the

cited art and removal thereof is respectfully requested.

Claim 33

Claim 33 depends from claim 29, and therefore the arguments given above in regard to claim 29 apply equally to claim 33. **Furthermore, the cited art does not teach or suggest *the peer node broadcasting a service discovery message on the peer-to-peer network; and the peer node receiving one or more service response messages to the service discovery message from one or more peers on the peer-to-peer network, wherein the service response messages each include information about the particular service, wherein the information is configured for use by the peer node in accessing the particular service; and wherein the service discovery message and the service response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a service discovery message and said receiving one or more service response messages are performed in accordance with the peer discovery protocol.*** The Examiner only states that claim 33 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 33 has a different scope than claims 1-6 and 8-11. Claim 33 recites a combination of limitations that are not found in claims 1-6 and 8-11. Therefore, the Examiner has failed to state a *prima facie* rejection for claim 33.

For at least the reasons above, the rejection of claim 33 is not supported by the cited art and removal thereof is respectfully requested.

Claim 34

Claim 34 depends from claim 29, and therefore the arguments given above in regard to claim 29 apply equally to claim 34. **Furthermore, the cited art does not teach or suggest *the peer node broadcasting a content discovery message on the peer-***

to-peer network; and the peer node receiving one or more content response messages to the content discovery message from one or more peers on the peer-to-peer network, wherein the content response messages each include information about the particular content, wherein the information is configured for use by the peer node in accessing the particular content; and wherein the content discovery message and the content response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a content discovery message and said receiving one or more content response messages are performed in accordance with the peer discovery protocol. The Examiner only states that claim 34 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 34 has a different scope than claims 1-6 and 8-11. Claim 34 recites a combination of limitations that are not found in claims 1-6 and 8-11. Therefore, the Examiner has failed to state a *prima facie* rejection for claim 34.

For at least the reasons above, the rejection of claim 34 is not supported by the cited art and removal thereof is respectfully requested.

Claim 35, 36 and 40

In further regard to claim 35, even if Teodosiu qualified as prior art, the Examiner has failed to state a *prima facie* rejection because the cited art fails to teach all limitations of Appellants' claimed invention.

The cited art fails to teach or suggest a method for discovering peer nodes on a peer-to-peer network, comprising: *a peer node broadcasting a peer group discovery message on the peer-to-peer network.* In (24)(H) on page 18 of the Final Office Action dated January 30, 2007, the Examiner asserts "Teodosiu teaches peer nodes can use a variety of network transmission protocols including broadcasting peer discovery message or peer group discovery message on the peer-to-peer network (Fig 1; page 9, paragraph

[0124], or pages 3-4 of Teodosiu's provisional application)." Paragraph [0124] states in part:

> …the elements in realm 150 communicate with one another using any of a variety of network transmission protocols, such as the User Datagram Protocol (UDP) or the Transmission Control Protocol (TCP), and any of a variety of application protocols, such as a proprietary protocol, the Hypertext Transfer Protocol (HTTP), the File Transfer Protocol (FTP), or the like.

Appellants note that supporting a network transmission protocol is distinctly different than the notion of broadcasting particular messages (e.g., a peer discovery message) as recited in claim 29. A specific message is not a transmission protocol. A specific message may be broadcast using a variety of network transmission protocols. The cited portion of Teodosiu does not teach or suggest the notions of *broadcasting a peer group discovery message on a peer-to-peer network*. Moreover, Appellants can find no teaching or suggestion of a peer group discovery message in the prior art. In any case, disclosing that peer nodes can use a variety of network transmission protocols does not teach or suggest the transmission of particular messages over those protocols.

Furthermore, paragraph [0124] of Teodosiu is not found in Teodosiu's provisional applications and thus cannot be used to reject Appellants' claims. More specifically, Appellants can find nothing in the cited portion of Teodosiu's provisional application that supports the notion that "peer nodes can use a variety of network transmission protocols".

In further regard to claim 35, the cited art fails to teach or suggest *the peer node receiving a peer group response messages to the peer group discovery message from a peer group on the peer-to-peer network, wherein the peer group response message includes information about the peer group, wherein the information is configured for use by the peer node in joining the peer group.* Teodosiu, in paragraphs [0037], discloses:

> [0037] For a peer 140 within realm 150, the first step in accessing a peer resource involves communicating with the peer's assigned home RNS

> server 130. The home RNS server 130, possibly in cooperation with registrar 110 and another RNS server 130, determines one or more locations within realm 150 where the resource is expected to be available. In one embodiment, the set of locations **returned by the home RNS server 130 to the requesting peer 140** may depend on the current network identity (in particular, the current IP address or IP addresses) of peer 140, on the current traffic load on the realm, as well as on other parameters that are known to the RNS servers 130. It is up to the peer 140 to take the second step to actually access the resource at the provided location(s).

It is clear from the above that Teodosiu teaches that "response messages" to a "discovery requests" are received from an RNS server, and not from *a peer group on the peer-to-peer network.* Teodosiu teaches that, to access a peer resource, a peer communicates with a home RNS server, which returns locations to the requesting peer, if found. Teodosiu does not teach or suggest that a peer broadcasts a message on a peer-to-peer network, and receives one or more response messages to the broadcast messages from a peer group on the peer-to-peer network. Furthermore, the cited art does not teach or suggest, alone or in combination, the notion of *a peer group response message that includes information about the peer group that is configured for use by the peer node in joining the peer group.*

In arguments directed at claim 1, the Examiner asserts that Badovinatz teaches "a membership protocol for adding modes to become members of a domain in a distributed computing environment which inherently supports peer-to-peer computing." The Examiner goes on to state that it would have been obvious to "combine the teachings of Teodosiu and Badovinatz to allow peer nodes to use peer membership protocol for joining or forming a peer group with other peer nodes because it would manage membership of a domain of computers of a distributed computing environment." However, Appellants note that "to support the conclusion that the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination or the examiner **must present a convincing line of reasoning** as to why the artisan would have found the claimed invention to have been

obvious in light of the teachings of the references..." *Ex Parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Int'f 1985).

Appellants note that Badovinatz does not mention peer-to-peer networking at all. Since the Examiner admits in regards to claim 1 that Teodosiu does not teach the subject functionality, it is incumbent upon the Examiner to "present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." However, Badovinatz only describes a mechanism for managing membership of a domain of **processors** in a distributed computing environment. Nowhere does Badovinatz "expressly or impliedly" suggest that this mechanism should be used in a peer computing system to enable peer nodes to broadcast peer group discovery messages and receive peer group response messages that information about peer groups that is configured for use by the peer node in joining the peer groups. The Examiner states that it would have been obvious to combine Teodosiu's peer computing system with Badovinatz's management of membership of a domain of processors for the advantage of "manag[ing] membership of a domain of computers of a distributed computing environment." However, nowhere do Teodosiu or Badovinatz "expressly or impliedly" suggest that "manag[ing] membership of a domain of computers of a distributed computing environment" would result from applying Badovinatz's teachings in a peer computing system or would be desirable in Teodosiu's system.

Badovinatz teaches a central server node (e.g., see "name server node which controls the admission of new nodes", col. 1, lines 42-43) as a mechanism for managing membership of a domain of **processors** in a distributed computing environment. By their very nature, peer computing systems typically seek to avoid a central server node. **Thus, Badovinatz actually teaches away from a peer-to-peer system.**

Appellants respectfully assert that "manag[ing] membership of a domain of computers of a distributed computing environment" is not commensurate with the suggested combination of Teodosiu's "peer computing system" and Badovinatz's

mechanism for managing membership of a domain of **processors** in a distributed computing environment. Further, as Badovinatz teaches a mechanism that provides the cited advantage for processors in a distributed computing environment, the Examiner provides no motivation to combine Teodosiu's "peer computing system" and Badovinatz's mechanism to obtain the cited advantage. In other words, the Examiner has only given a reason to use Badovinatz's system alone, not a reason to modify Teodosiu's system. Appellants therefore respectfully assert that the Examiner's "line of reasoning" that combining Teodosiu's "peer computing system" with Badovinatz's mechanism to "manage membership of a domain of computers of a distributed computing environment" is not a convincing line of reasoning as to why the claimed invention would have been obvious in light of the teachings of the references.

The Examiner stated that the distributed computing environment of Badovinatz "inherently supports peer-to-peer computing." The Examiner is clearly incorrect. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Badovinatz's system does not necessarily support peer-to-peer computing. In fact, as shown above, Badovinatz's reliance on a central server node specifically teaches away from a peer-to-peer system.

In (24)(C) of the Final Office Action dated January 30, 2007, the Examiner asserts that "In the remarks, Appellant[s] argued in substance that...there is no motivation to combine the teachings of Teodosiu and Badovinatz." On p. 9 of the previous Action, and repeated on p. 5 of the Final Office Action dated January 30, 2007, the Examiner states that it would be obvious to combine the references "because it would manage membership of a domain of computers of a distributed computing environment", citing col. 1, lines 5-8, of Badovinatz in the previous office action. However, as noted above, this is simply a reason to use Badovinatz's system alone, not a reason to modify Teodosiu. Furthermore, Badovinatz's system is specifically not a peer-to-peer system,

and actually teaches away from a peer-to-peer system. One of ordinary skill in the art would have no reason to apply the teaching of Badovinatz to Teodosiu.

In (24)(B) of the Final Office Action dated January 30, 2007, the Examiner asserts that "In the remarks, Appellant[s] argued in substance that...the prior art does not teach peer-to-peer computing." Appellants have not so argued. Appellants have noted that the Badovinatz reference does not mention peer-to-peer networking at all, and proceeded from there to make further arguments, as noted above.

In the Advisory Action dated April 10, 2007, in response to the Appellants' arguments traversing the rejections of claims 1-6, 8-18, 21 and 23-40 under 35 U.S.C. § 103(a), the Examiner asserted that the Appellants' arguments "are not deemed to be persuasive", and "In addition, office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure…Therefore, limitations that are argued by Appellant but are not in claimed language are not being considered by Examiner." Since the Examiner has given no indication as to what "limitations…are argued by Appellant but are not in claimed language", the Examiner's assertion is without merit. **The Examiner did not provide any substantive responses to the Appellants' arguments in the Advisory Action.**

In further regard to claim 35, the cited art fails to teach or suggest *wherein the peer group discovery message and the peer group response message are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform, and wherein said broadcasting a peer group discovery message and said receiving the peer group response message are performed in accordance with the peer discovery protocol.* In arguments directed to claim 1, the Examiner cited Teodosiu, paragraphs [0035]-[0037] in support of the assertion that Teodosiu teaches a peer discovery protocol. Teodosiu discloses a Resource Naming Service (RNS) server that receives a request for a resource from a peer, attempts to determine a location or locations for the resource and, if a location or locations are found, returns the location(s) to the requesting peer, which then is responsible for accessing the resource at (one of the) returned location(s). Teodosiu

does not teach or suggest a *peer discovery protocol comprised in a peer-to-peer platform* that is used in broadcasting peer group discovery messages to peers on a peer-to-peer network and receiving peer group response messages from peer groups on the peer-to-peer network, as is recited in claim 35. Instead, in the above citation, Teodosiu clearly describes a "two-step process" for accessing a resource that does not involve the initiating peer participating with any other peer node in a peer discovery protocol; instead, the process relies on a central RNS server. Teodosiu describes an **RNS server** with which peers must communicate to request locations of resources as a first step in the process. If the RNS server determines one or more locations within a "realm" where the resource is expected to be available, the RNS server returns the locations to the requesting peer. The second step of the process is the peer actually accessing the resource at the provided location(s). Teodosiu states that it is "up to the peer" to take this second step.

Thus, Teodosiu clearly does **not** teach or suggest in the provided citation (or elsewhere) a peer performing broadcasting of request messages on a peer-to-peer network and receiving response messages from peer groups, and furthermore does not describe performing said broadcasting and receiving in accordance with a peer discovery protocol or that the request messages and response messages are formatted in accordance with such a peer discovery protocol. According to Teodosiu, to discover the location of a resource, a peer first communicates with a central RNS server or locator service, and receives responses from the central RNS server. Teodosiu's teachings of a locator service that depends on a central RNS server is fundamentally different than what is recited in claim 29.

Furthermore, paragraphs [0035 - 0037] of Teodosiu are not found in Teodosiu's provisional application and thus cannot be used to reject Appellants' claims.

In the Advisory Action dated April 10, 2007, in response to the Appellants' arguments traversing the rejections of claims 1-6, 8-18, 21 and 23-40 under 35 U.S.C. §

103(a), the Examiner asserted that the Appellants' arguments "are not deemed to be persuasive", and "In addition, office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure…Therefore, limitations that are argued by Appellant but are not in claimed language are not being considered by Examiner." Since the Examiner has given no indication as to what "limitations…are argued by Appellant but are not in claimed language", the Examiner's assertion is without merit. **The Examiner did not provide any substantive responses to the Appellants' arguments in the Advisory Action.**

In further regard to claim 35, even if Teodosiu qualified as prior art, the Examiner has failed to state a *prima facie* rejection for claim 35. The Examiner only states that claim 35 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 35 has a different scope than claims 1-6 and 8-11. **Claim 35 recites a combination of limitations that are not found in claims 1-6 and 8-11. Since the Examiner has failed to address the differences between the claims, the Examiner's rejection of claim 35 is improper.**

For at least the reasons above, the rejection of claim 35 is not supported by the cited art and removal thereof is respectfully requested.

Claim 37

Claim 37 depends from claim 36, and therefore the arguments given above in regard to claim 35 and 36 apply equally to claim 37. **Furthermore, the cited art does not teach or suggest *wherein said joining the peer group comprises: the peer node sending a peer group membership application message to the peer group, wherein the peer group membership application includes information on the peer node's qualifications for membership in the peer group; the peer group sending a peer group membership acceptance message to the peer node if the peer node qualifies for peer group membership; wherein the peer group membership application message and the peer group membership acceptance message are in a format defined by a peer***

membership protocol comprised in the peer-to-peer platform. The Examiner only states that claim 37 has similar limitations to claims 1-6 and 8-11 and is being rejected under the same rationale as claims 1-6 and 8-11. However, claim 37 has a different scope than claims 1-6 and 8-11. Claim 37 recites a combination of limitations that are not found in claims 1-6 and 8-11. Therefore, the Examiner has failed to state a *prima facie* rejection for claim 37.

For at least the reasons above, the rejection of claim 37 is not supported by the cited art and removal thereof is respectfully requested.

CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 1-40 was erroneous, and reversal of his decision is respectfully requested.

The Commissioner is authorized to charge the appeal brief fee of $500.00 and any other fees that may be due to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-82104/RCK.

Respectfully submitted,

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Date: July 2, 2007

VIII. CLAIMS APPENDIX

The claims on appeal are as follows.

1. A peer computing system comprising:

a plurality of peer nodes;

wherein at least a subset of the peer nodes are configured to participate in a peer discovery protocol to discover other peer nodes; and

wherein at least a subset of the peer nodes are configured to participate in a peer membership protocol for joining or forming a peer group with other peer nodes.

2. The peer computing system as recited in claim 1, wherein the member peer nodes in said peer group are configured to find and exchange content in said peer group.

3. The peer computing system as recited in claim 1, wherein said peer group is a collection of cooperating peer nodes that provide a common set of services in the peer computing system.

4. The peer computing system as recited in claim 3, wherein the common set of services include one or more core services.

5. The peer computing system as recited in claim 4, wherein the core services include:

a discovery service configured for use by member peer nodes in said peer group to discover advertised resources in the peer computing system, wherein

the resources include peers and peer groups, and wherein the discovery service uses the discovery protocol; and

a membership service configured for use by member peer nodes in said peer group to reject or accept group membership applications, wherein the membership service uses the membership protocol.

6. The peer computing system as recited in claim 1, wherein one or more peer nodes in said peer group are configured to participate in a peer resolver protocol configured for use in sending search queries from one peer group member to another peer group member.

7. The peer computing system as recited in claim 1, wherein one or more peer nodes in said peer group are configured to participate in a pipe binding protocol configured for use in finding a physical location of a pipe endpoint and binding to the pipe endpoint.

8. The peer computing system as recited in claim 1, wherein one or more peer nodes in said peer group are configured to participate in an endpoint routing protocol for enabling the peer nodes to request peer routing information to reach other peer nodes.

9. The peer computing system as recited in claim 1, wherein at least a subset of the peer nodes are configured to participate in a peer information protocol for enabling the peer nodes to learn about other peer nodes' capabilities and status.

10. The peer computing system as recited in claim 1, wherein each of the plurality of peer nodes is further configured to use an advertisement format for describing and publishing advertisements for resources in a peer-to-peer environment.

11. The peer computing system as recited in claim 10, wherein the resources include one or more of the peer nodes, peer groups, content, services, applications, pipes,

and pipe endpoints, wherein the pipes are communications channels between one or more of the peer nodes, the services, and the applications in the peer-to-peer environment, and wherein the pipe endpoints are network interfaces on the peer nodes that are configured to be bound to the pipes to establish the communications channels.

12. A peer computing system comprising:

a plurality of peer nodes;

means for at least a subset of the peer nodes to discover resources in the peer computing system, wherein the resources include peer nodes and peer groups, and wherein the resources further include one or more of pipes, endpoints, services and content; and

means for at least a subset of the peer nodes to join or form a peer group with other peer nodes;

wherein said peer group is a collection of cooperating peer nodes that provide a common set of services in the peer computing system.

13. The peer computing system as recited in claim 12, further comprising means for member peer nodes in said peer group to reject or accept peer group membership applications.

14. The peer computing system as recited in claim 12, further comprising means for member peer nodes in said peer group to send search queries from one peer group member to another peer group member.

15. The peer computing system as recited in claim 12, further comprising means for member peer nodes in said peer group to bind to a pipe endpoint.

16. The peer computing system as recited in claim 12, further comprising means for member peer nodes in said peer group to request peer routing information to reach other peer nodes.

17. The peer computing system as recited in claim 12, further comprising means for the plurality of peer nodes to request information about other peer nodes' capabilities and status.

18. A tangible, computer-readable medium, comprising program instructions computer-executable to implement a peer-to-peer platform comprising:

a peer discovery protocol for discovering peers and peer groups in a peer-to-peer network;

a peer membership protocol for use by the peers in applying for membership in one or more of the peer groups;

wherein the peer-to-peer platform is configured for use in the peer-to-peer network to enable the peers to discover each other, to communicate with each other, and to cooperate with each other to form the peer groups.

19. The computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises:

a peer resolver protocol configured for use in sending search queries from one peer group member to another peer group member;

a peer information protocol for enabling the peers to learn about other peers' capabilities and status;

a pipe binding protocol configured for use in finding a physical location of a pipe endpoint and binding the pipe endpoint to a peer; and

an endpoint routing protocol for enabling the peers to request peer routing information to reach other peers.

20. The computer-readable medium as recited in claim 19, wherein each of the protocols defines one or more message formats configured for use in exchanging messages between the peers in accordance with the particular protocol.

21. The computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises a peer resolver protocol configured for use in sending search queries from one peer group member to another peer group member.

22. The computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises a pipe binding protocol configured for use in finding a physical location of a pipe endpoint and in binding to the pipe endpoint.

23. The computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises an endpoint routing protocol for enabling the peer nodes to request peer routing information to reach other peer nodes.

24. The computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises a peer information protocol for enabling the peer nodes to learn about other peer nodes' capabilities and status.

25. The computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises a peer advertisement format configured for use in advertising the peers in the peer-to-peer network, wherein said discovering peers returns one or more peer advertisements formatted in accordance with the peer advertisement format.

26. The computer-readable medium as recited in claim 18, wherein the peer-to-peer platform further comprises a peer group advertisement format configured for use in advertising the peer groups in the peer-to-peer network, wherein said discovering peer groups returns one or more peer group advertisements formatted in accordance with the peer group advertisement format.

27. The computer-readable medium as recited in claim 18, wherein the peer discovery protocol is further configured for discovering one or more of pipes, endpoints, services and content in the peer-to-peer network.

28. The computer-readable medium as recited in claim 27, wherein the peer-to-peer platform further comprises one or more of:

a pipe advertisement format configured for use in advertising pipes in the peer-to-peer network, wherein said discovering pipes returns one or more pipe advertisements formatted in accordance with the pipe advertisement format;

an endpoint advertisement format configured for use in advertising endpoints in the peer-to-peer network, wherein said discovering endpoints returns one or more endpoint advertisements formatted in accordance with the endpoint advertisement format;

a service advertisement format configured for use in advertising services provided by the peers in the peer-to-peer network, wherein said discovering services returns one or more service advertisements formatted in accordance with the service advertisement format; and

a content advertisement format configured for use in advertising the content in the peer-to-peer network, wherein said discovering content returns one or

more content advertisements formatted in accordance with the content advertisement format.

29. A method for discovering peer nodes on a peer-to-peer network, comprising:

a peer node broadcasting a peer discovery message on the peer-to-peer network; and

the peer node receiving one or more response messages to the peer discovery message from one or more other peer nodes on the peer-to-peer network, wherein the response messages each include information about the particular peer node, wherein the information is configured for use by the peer node in establishing a connection to the particular peer node; and

wherein the peer discovery message and the response messages are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform, and wherein said broadcasting and said receiving are performed in accordance with the peer discovery protocol.

30. The method as recited in claim 29, further comprising:

the peer node broadcasting a peer group discovery message on the peer-to-peer network; and

the peer node receiving one or more peer group response messages to the peer group discovery message from one or more peer groups on the peer-to-peer network, wherein the peer group response messages each include information about the particular peer group, wherein the information is configured for use by the peer node in joining the particular peer group; and

wherein the peer group discovery message and the peer group response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a peer group discovery message and said receiving one or more peer group response messages are performed in accordance with the peer discovery protocol.

31. The method as recited in claim 29, further comprising:

the peer node broadcasting a pipe discovery message on the peer-to-peer network; and

the peer node receiving one or more pipe response messages to the pipe discovery message from one or more peers on the peer-to-peer network, wherein the pipe response messages each include information about the particular pipe, wherein the information is configured for use by the peer node in binding to the particular pipe; and

wherein the pipe discovery message and the pipe response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a pipe discovery message and said receiving one or more pipe response messages are performed in accordance with the peer discovery protocol.

32. The method as recited in claim 29, further comprising:

the peer node broadcasting an endpoint discovery message on the peer-to-peer network; and

the peer node receiving one or more endpoint response messages to the endpoint discovery message from one or more peers on the peer-to-peer network, wherein the endpoint response messages each include information about

the particular endpoint, wherein the information is configured for use by the peer node in binding to the particular endpoint; and

wherein the endpoint discovery message and the endpoint response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting an endpoint discovery message and said receiving one or more endpoint response messages are performed in accordance with the peer discovery protocol.

33. The method as recited in claim 29, further comprising:

the peer node broadcasting a service discovery message on the peer-to-peer network; and

the peer node receiving one or more service response messages to the service discovery message from one or more peers on the peer-to-peer network, wherein the service response messages each include information about the particular service, wherein the information is configured for use by the peer node in accessing the particular service; and

wherein the service discovery message and the service response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a service discovery message and said receiving one or more service response messages are performed in accordance with the peer discovery protocol.

34. The method as recited in claim 29, further comprising:

the peer node broadcasting a content discovery message on the peer-to-peer network; and

the peer node receiving one or more content response messages to the content discovery message from one or more peers on the peer-to-peer network, wherein the content response messages each include information about the particular content, wherein the information is configured for use by the peer node in accessing the particular content; and

wherein the content discovery message and the content response messages are in a format defined by the peer discovery protocol, and wherein said broadcasting a content discovery message and said receiving one or more content response messages are performed in accordance with the peer discovery protocol.

35. A method for discovering peer groups on a peer-to-peer network, comprising:

a peer node broadcasting a peer group discovery message on the peer-to-peer network; and

the peer node receiving a peer group response messages to the peer group discovery message from a peer group on the peer-to-peer network, wherein the peer group response message includes information about the peer group, wherein the information is configured for use by the peer node in joining the peer group; and

wherein the peer group discovery message and the peer group response message are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform, and wherein said broadcasting a peer group discovery message and said receiving the peer group response message are performed in accordance with the peer discovery protocol.

36. The method as recited in claim 35, further comprising the peer node joining the peer group in accordance with the information received in the peer group response

message.

37. The method as recited in claim 36, wherein said joining the peer group comprises:

the peer node sending a peer group membership application message to the peer group, wherein the peer group membership application includes information on the peer node's qualifications for membership in the peer group;

the peer group sending a peer group membership acceptance message to the peer node if the peer node qualifies for peer group membership;

wherein the peer group membership application message and the peer group membership acceptance message are in a format defined by a peer membership protocol comprised in the peer-to-peer platform.

38. A tangible, computer-readable medium, comprising program instructions, wherein the program instructions are computer-executable to implement:

a peer node broadcasting a peer discovery message on the peer-to-peer network; and

the peer node receiving one or more response messages to the peer discovery message from one or more other peer nodes on the peer-to-peer network, wherein the response messages each include information about the particular peer node, wherein the information is configured for use by the peer node in establishing a connection to the particular peer node; and

wherein the peer discovery message and the response messages are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform,

and wherein said broadcasting and said receiving are performed in accordance with the peer discovery protocol.

39. The computer-readable medium as recited in claim 38, wherein the program instructions are further computer-executable to implement:

the peer node broadcasting a peer group discovery message on the peer-to-peer network; and

the peer node receiving one or more peer group response messages to the peer group discovery message from one or more peer groups on the peer-to-peer network, wherein the peer group response messages each include information about the particular peer group, wherein the information is configured for use by the peer node in joining the particular peer group; and

wherein the peer group discovery message and the peer group response messages are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform, and wherein said broadcasting a peer group discovery message and said receiving one or more peer group response messages are performed in accordance with the peer discovery protocol.

40. A tangible, computer-readable medium, comprising program instructions, wherein the program instructions are computer-executable to implement:

a peer node broadcasting a peer group discovery message on the peer-to-peer network; and

the peer node receiving a peer group response messages to the peer group discovery message from a peer group on the peer-to-peer network, wherein the peer group response message includes information about the

peer group, wherein the information is configured for use by the peer node in joining the peer group; and

wherein the peer group discovery message and the peer group response messages are in a format defined by a peer discovery protocol comprised in a peer-to-peer platform, and wherein said broadcasting a peer group discovery message and said receiving one or more peer group response messages are performed in accordance with the peer discovery protocol.

IX. EVIDENCE APPENDIX

No evidence submitted under 37 CFR §§ 1.130, 1.131 or 1.132 or otherwise entered by the Examiner is relied upon in this appeal.

X. RELATED PROCEEDINGS APPENDIX

There are no related proceedings.